

FIG. 1

Type	Origin	PB1: Positions													
		52	54	105	175	208	298	364	383	384	396	431	464		
H7N7	Bratislava 82 chicken	K	K	N	D	K	L	L	E	P	I	Y	D		
H7N7	Rostock34 chicken	K	K	N	D	K	L	L	E	S	L	Y	D		
H1N1	WSN33 human	R	R	T	N	R	I	I	D	S	L	H	N		
H1N1	Wisconsin88 human	R	K	N	E	K	L	L	D	S	L	Y	D		
H2N2	Singapore57 human	K	K	N	D	K	L	L	E	S	L	Y	D		
H2N2	Ann Arbor60 human	K	K	N	D	K	L	L	E	S	L	Y	D		
H3N2	Honkong68 human	K	K	N	D	K	L	L	E	S	L	Y	D		
H3N2	Shiga97 human	K	K	N	D	K	L	L	E	S	L	Y	D		
H3N2	Hongkong82 swine	K	K	N	D	K	L	L	E	S	L	Y	D		
H3N2	Katakyushu93 human	R	K	N	D	K	L	L	E	S	L	Y	D		
H3N8	Tennessee86 equine	K	K	N	N	K	L	L	E	S	L	Y	D		
H4N2	Minnesota80 turkey	K	K	N	D	K	L	L	E	S	L	Y	D		
H4N6	Ontario99 swine	K	K	N	D	K	L	L	E	S	L	Y	D		
H5N1	Hongkong97 human	K	R	N	D	K	L	L	E	S	L	Y	D		
H6N1	Taiwan99 chicken	K	K	N	D	K	L	L	E	S	L	Y	D		
H7N7	London73 equine	K	K	N	D	K	L	L	E	S	L	Y	D		
H9N2	Pakistan99 chicken	K	K	N	D	K	L	L	E	S	L	Y	D		

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FIG 1 (continued)

Type	Origin	PB1: Positions									
		473	576	584	628	633	636	644	645	654	741
H7N7	Bratislava 82 chicken	V	L	R	M	S	E	A	V	S	A
H7N7	Rostock34 chicken	V	L	R	L	S	E	V	V	S	A
H1N1	WSN33 human	L	I	H	L	N	D	V	I	N	T
H1N1	Wisconsin88 human	L	I	R	L	S	E	V	V	T	A
H2N2	Singapore57 human	V	L	R	L	S	E	V	V	S	A
H2N2	Ann Arbor60 human	V	L	R	L	S	E	V	V	S	A
H3N2	Honkong68 human	V	L	Q	L	S	E	V	V	S	S
H3N2	Shiga97 human	V	L	Q	L	S	E	V	V	S	S
H3N2	Hongkong82 swine	V	L	R	L	S	E	V	V	S	S
H3N2	Katakyushu93 human	V	L	Q	L	S	E	V	V	S	S
H3N8	Tennessee86 equine	V	L	R	L	S	E	V	V	S	S
H4N2	Minnesota80 turkey	V	L	R	L	S	E	V	V	N	A
H4N6	Ontario99 swine	V	L	R	L	S	E	V	V	S	A
H5N1	Hongkong97 human	V	L	R	L	S	E	V	V	S	A
H6N1	Taiwan99 chicken	V	L	R	L	S	E	V	V	S	A
H7N7	London73 equine	V	L	R	L	S	E	V	V	S	A
H9N2	Pakistan99 chicken	V	L	R	L	S	E	V	V	S	A

Fig.2

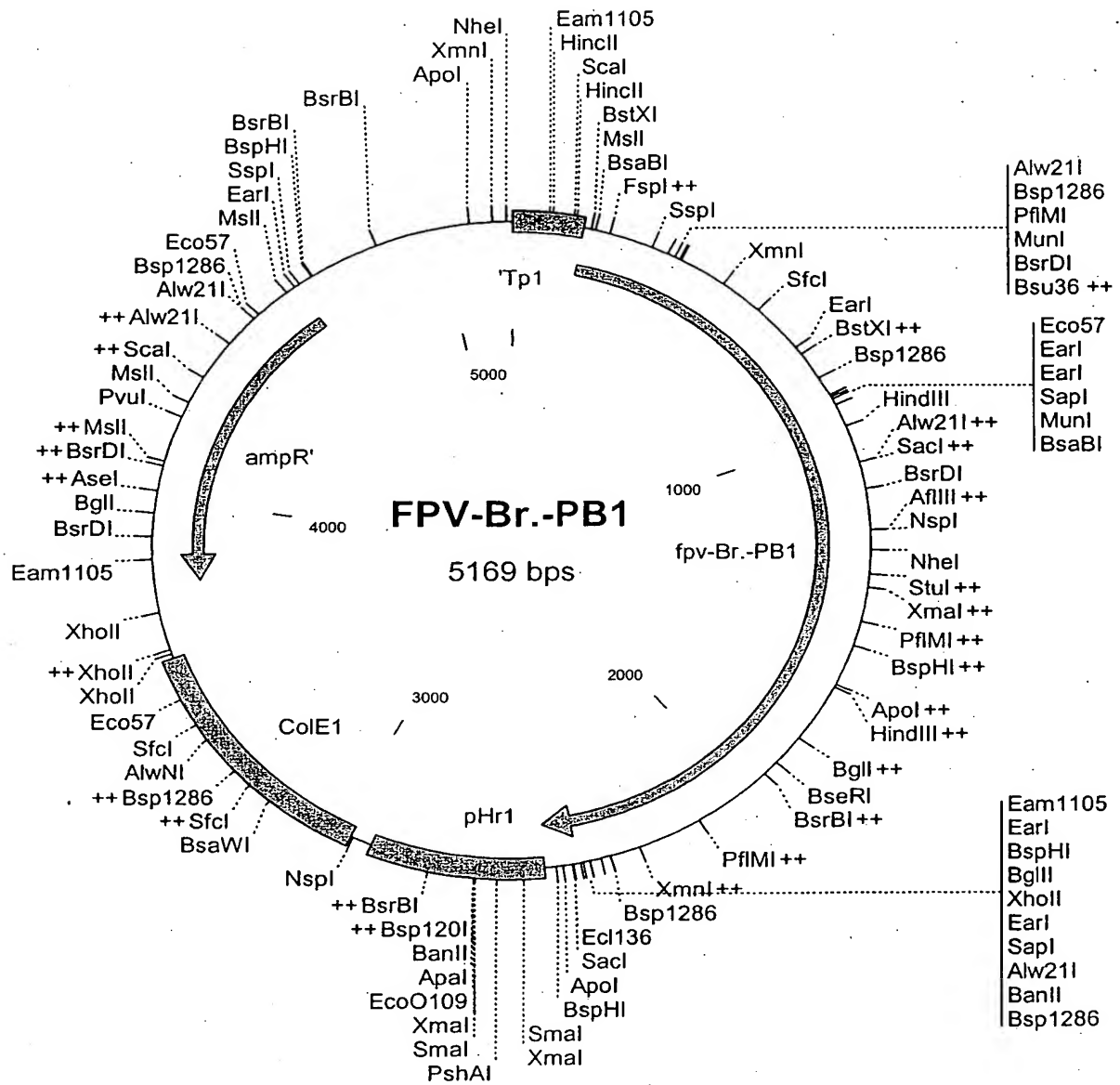
Fig.2

plasmid	constitution							other segments	orig.titer	CAT assay			
map PB1	<u>v1 / c1</u>	x3'	<u>c2</u>	<u>S_L</u> <u>P_I</u> <u>Ⓟ</u>		x5'	H R L V MA <u>v2</u> T A						
WSN-PB1	WSN							WSN	7x10 ⁸ /ml	11	2		
pHL3102	WSN		FPV					WSN	1x10 ⁸ /ml	22	38		
pHL3103	FPV		WSN					WSN	2x10 ⁷ /ml	10	13		
pHL3130	WSN	FPV					WSN	1x10 ⁵ /ml	14	25			
pHL3131	WSN	FPV	WSN					WSN	2x10 ⁶ /ml	18	25		
pHL3115	FPV					WSN					3x10 ⁵ /ml	17	28
pHL1844	FPV							FPV	3x10 ⁹ /ml	48	100		

Fig.3

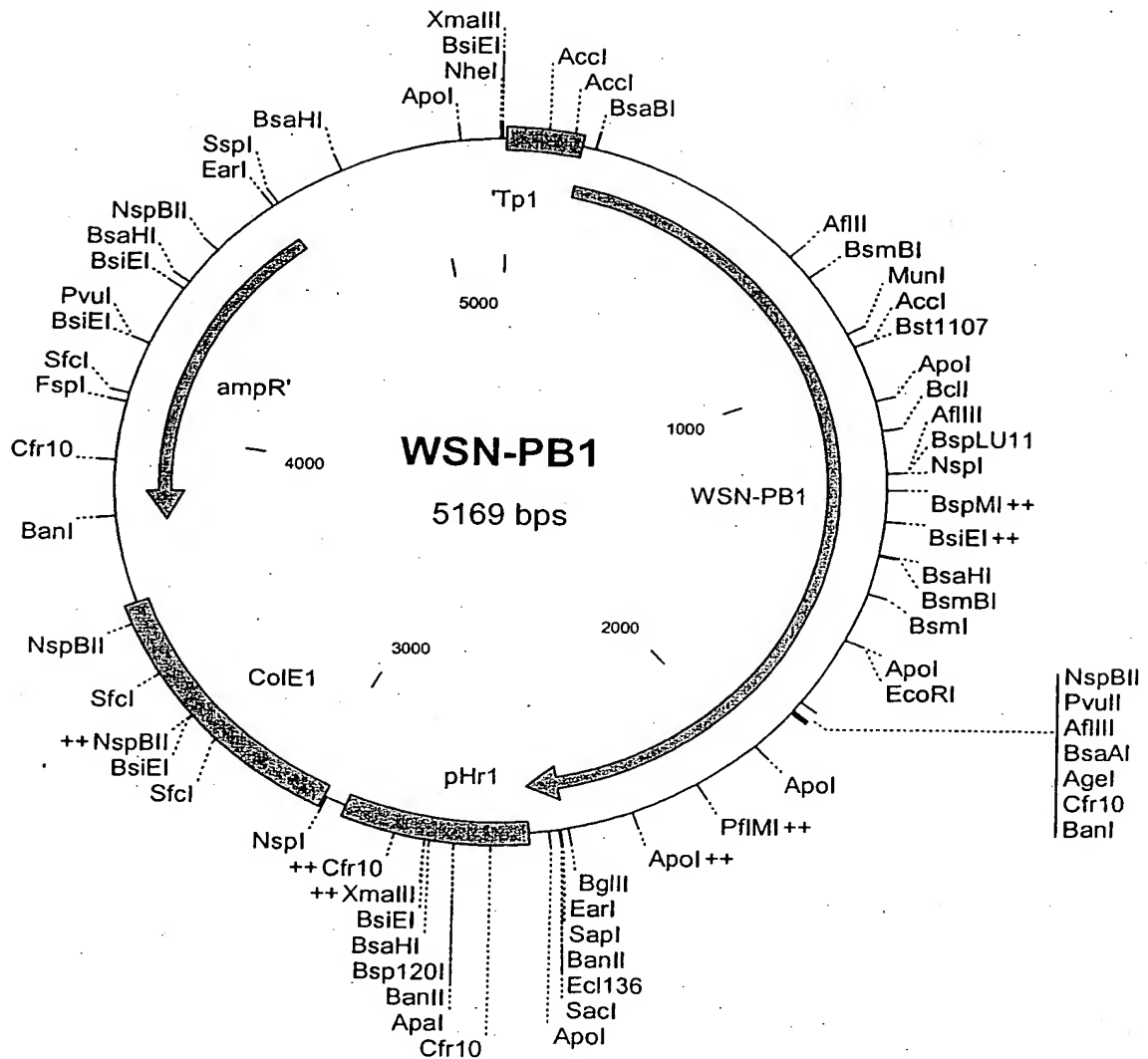
plasmid	constitution						other segments	orig.titer	CAT assay	
map PB1	v1 / c1	x3'	c2	S L P I	x5'	H R	L V MA v2 T A			
WSN-PB1				WSN				WSN	7×10^8 /ml	11 2
pHL3204					FPV			WSN	2×10^8 /ml	12 3
pHL3203							FPV	WSN	1×10^8 /ml	24 42
pHL3246			FPV					WSN	3×10^8 /ml	10 3
pHL3247				FPV				WSN	4×10^6 /ml	20 29
pHL3258								WSN	1×10^7 /ml	28 50
pHL3259								WSN	3×10^7 /ml	32 61
pHL3268							FPV	WSN	3×10^7 /ml	39 71
pHL1844							FPV	FPV	3×10^9 /ml	48 100

Fig. 4



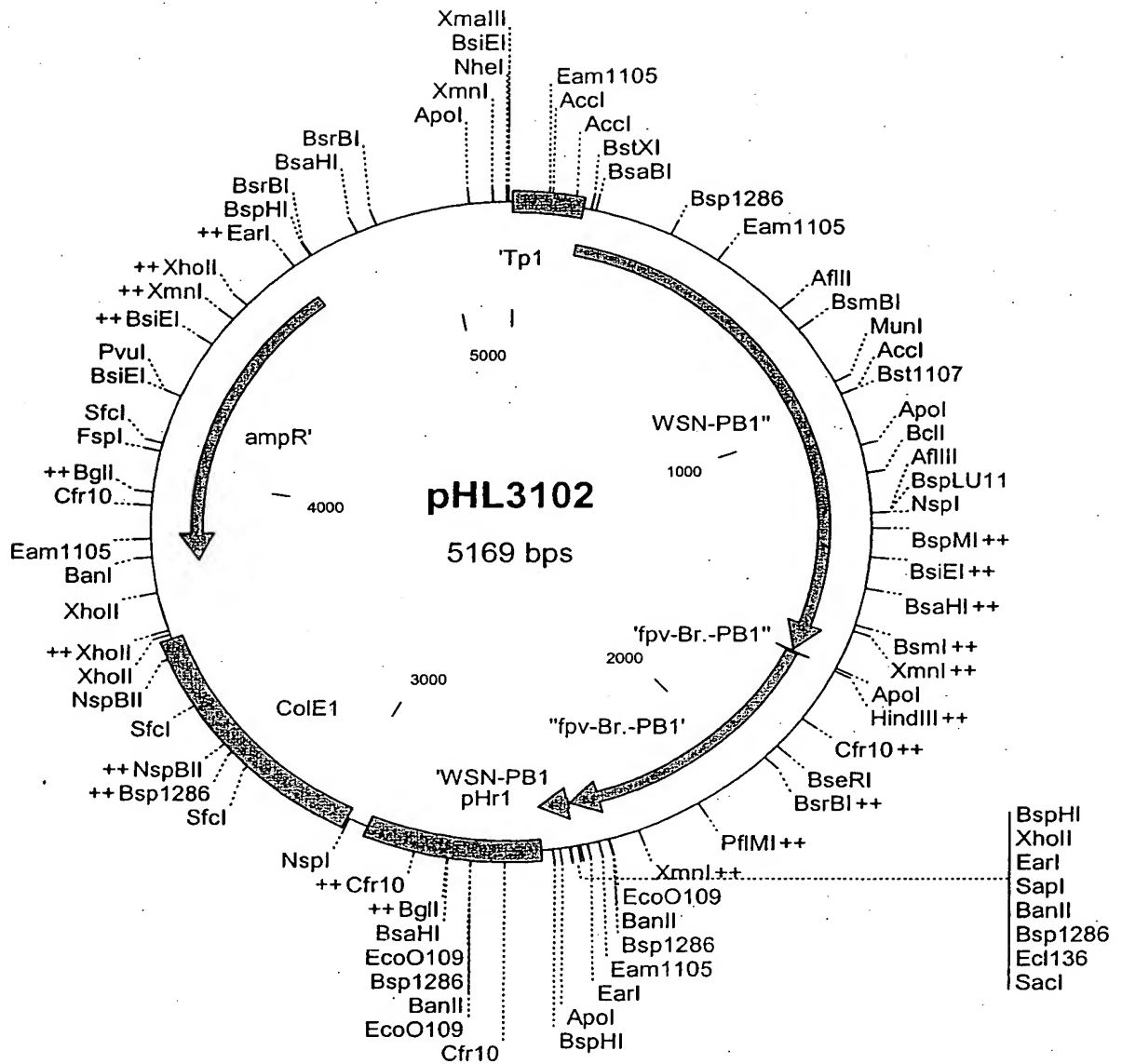
1007337-00000

Fig. 5



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Fig. 6



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Fig. 7

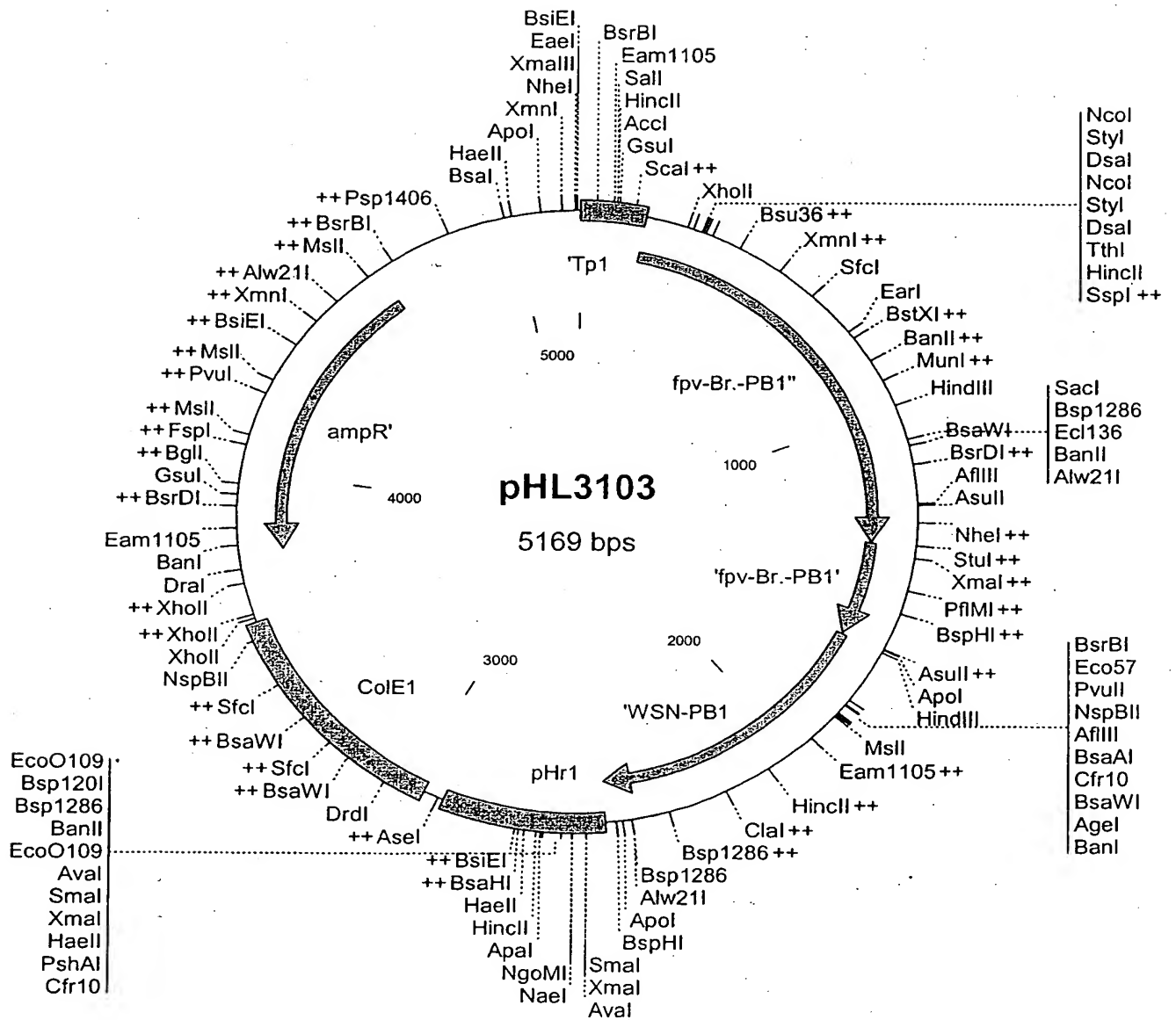


Fig. 8

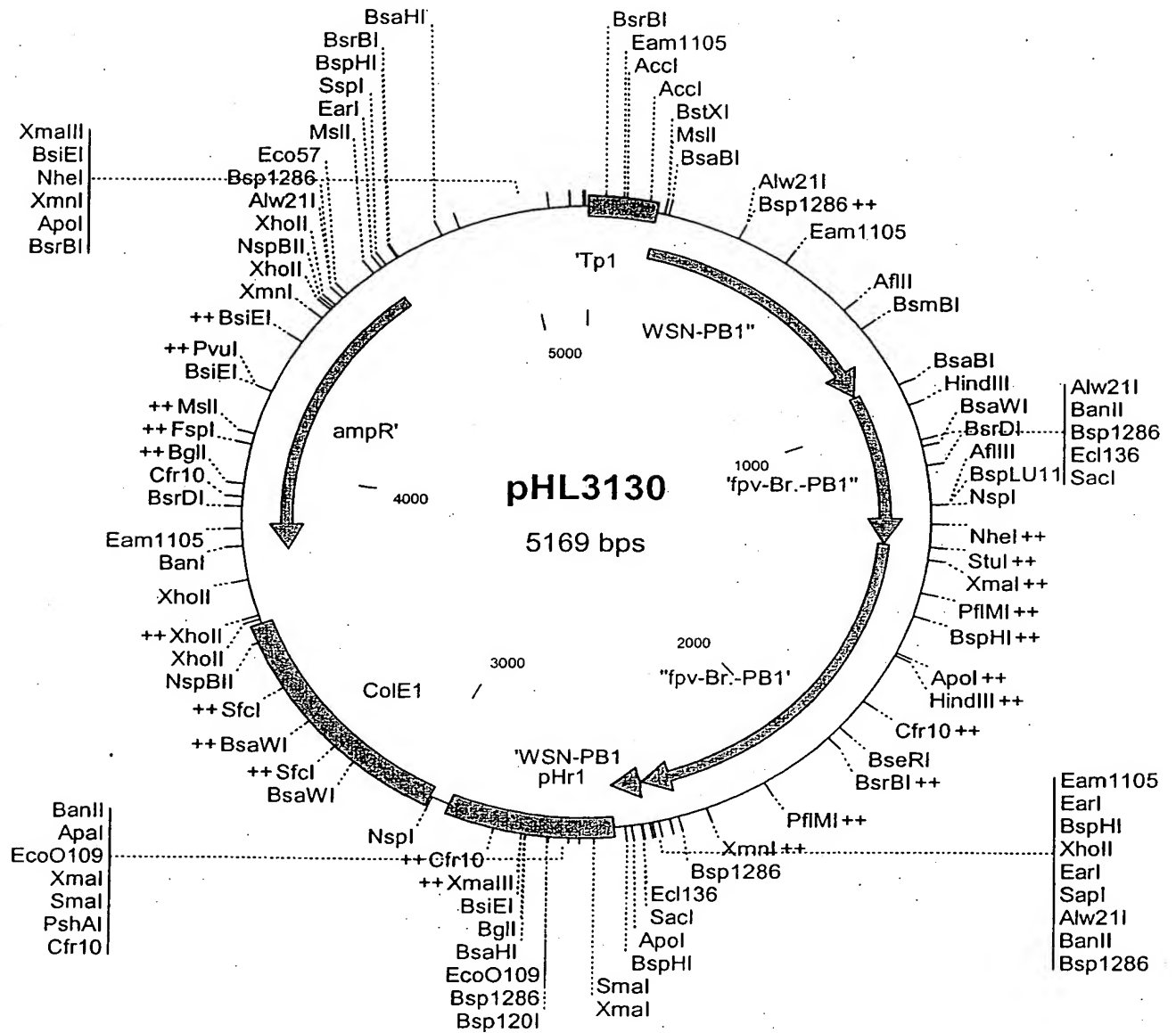


Fig. 9

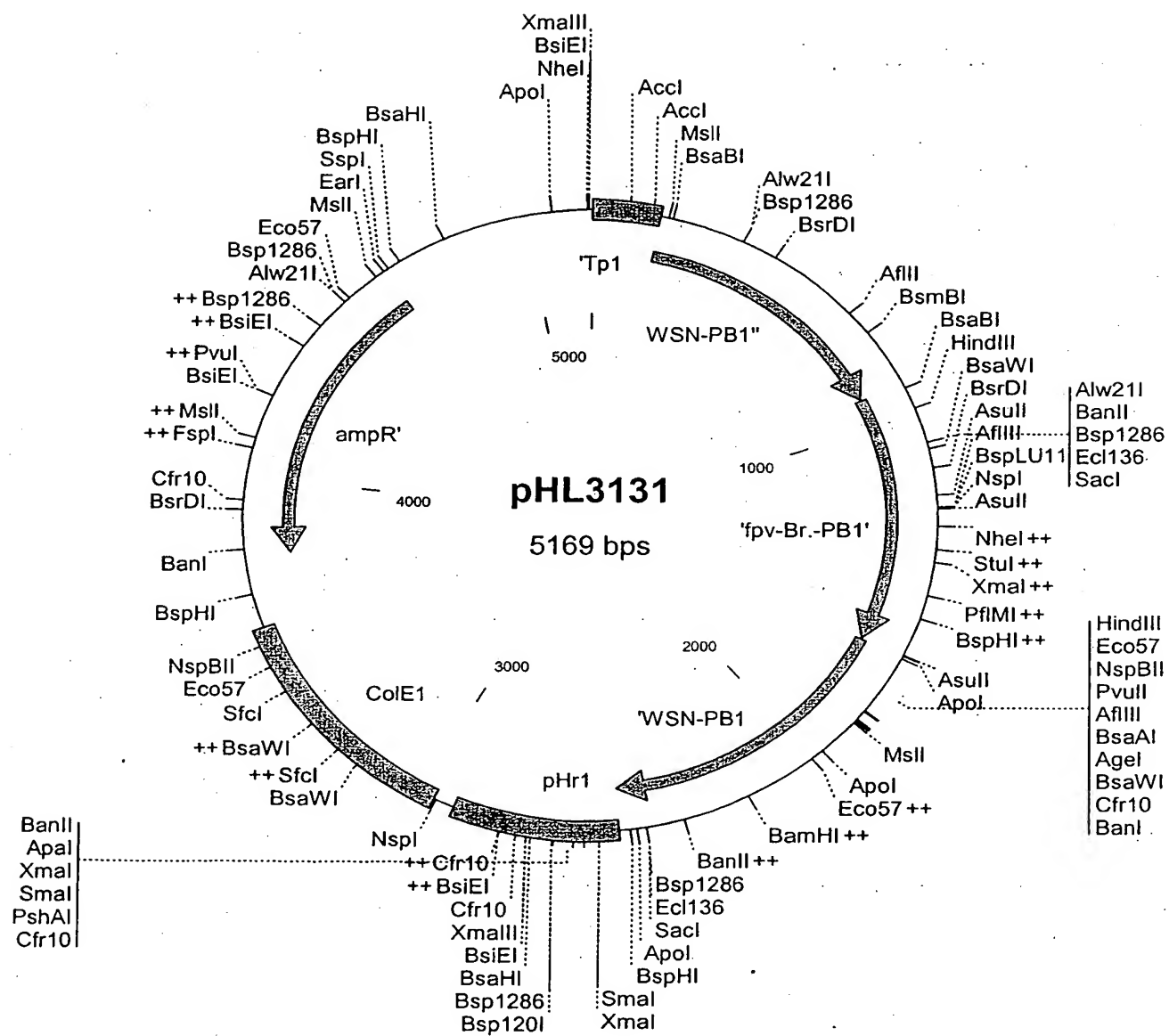
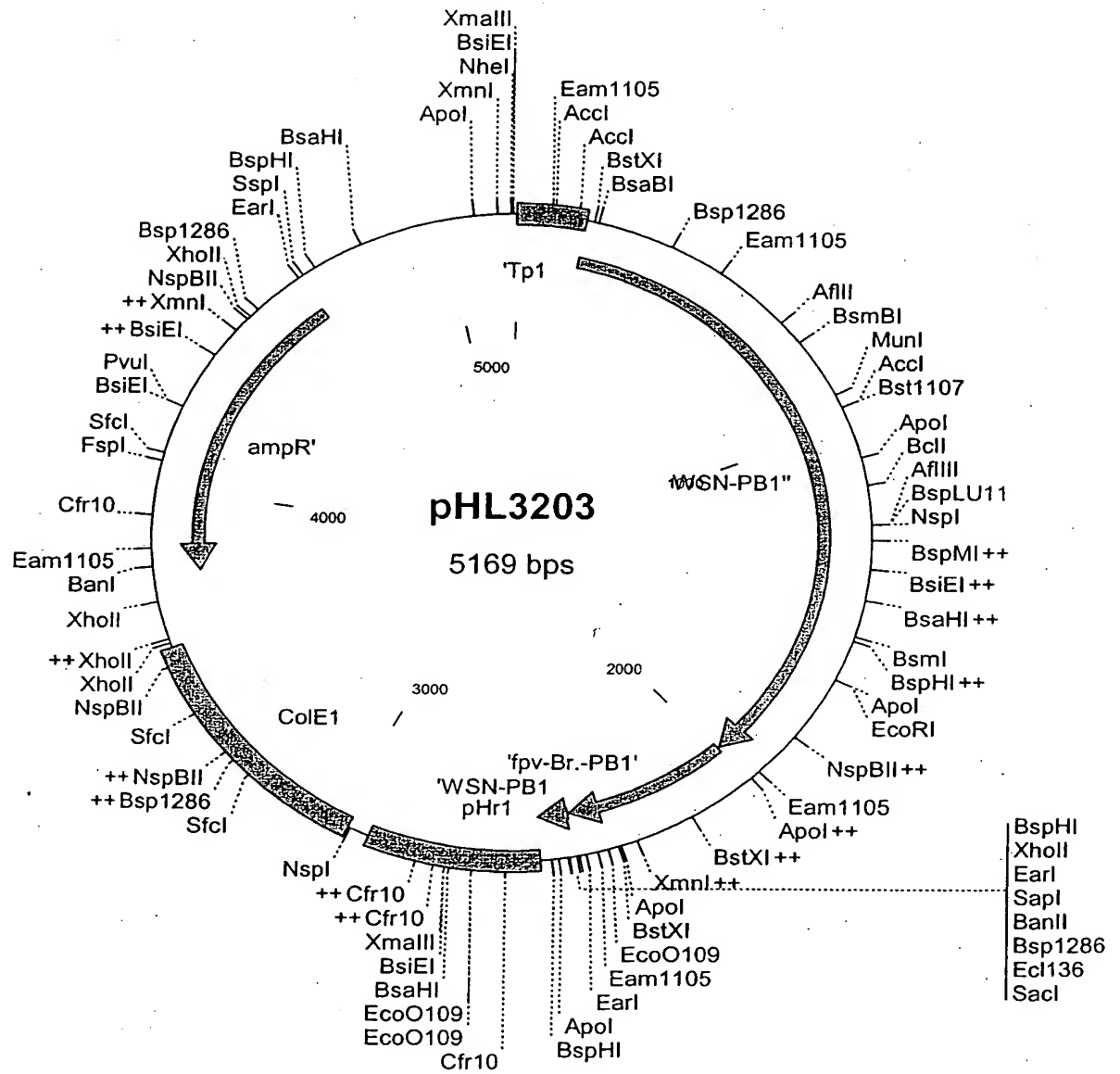


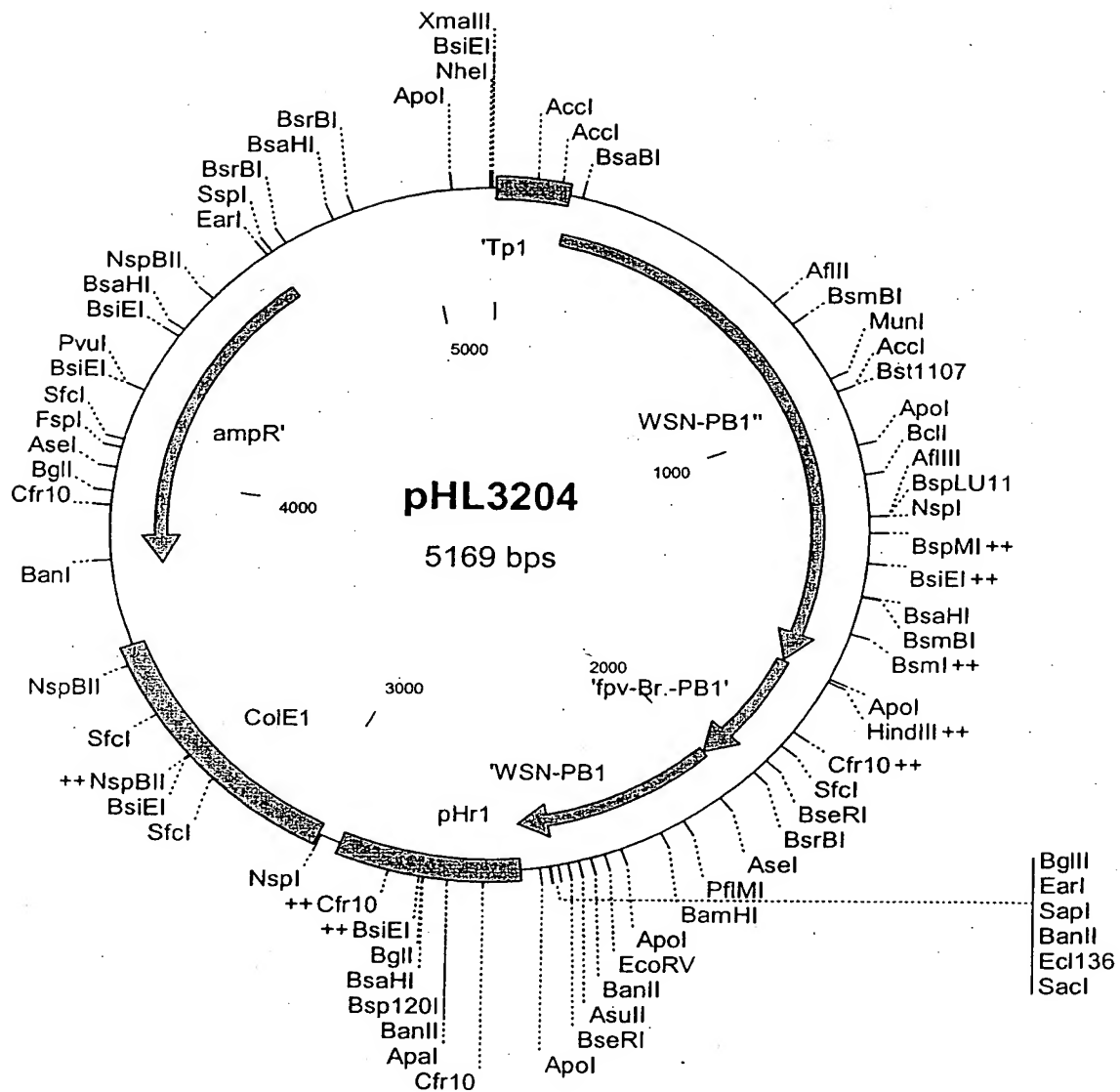
Fig. 10



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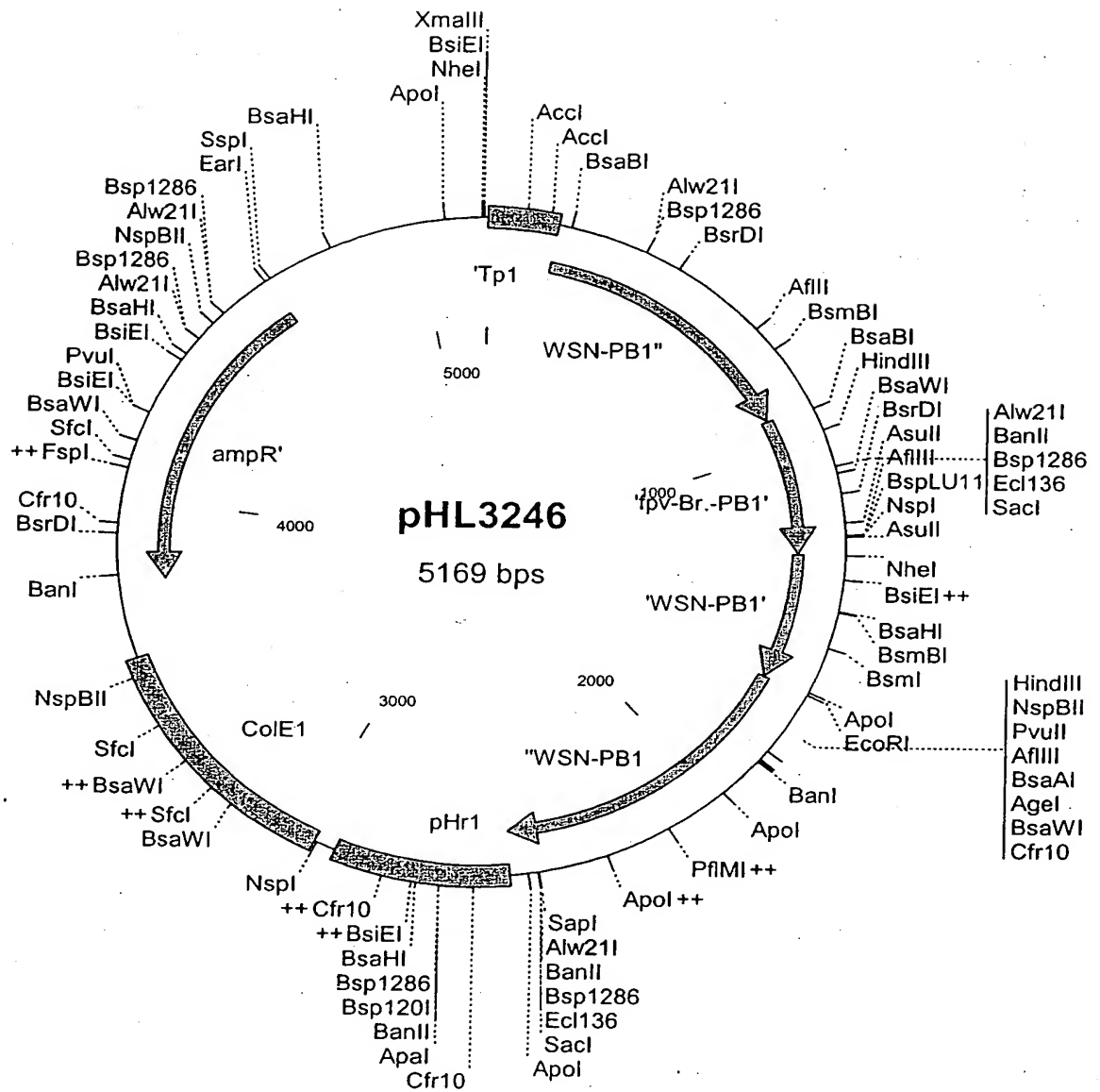
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Fig. 11



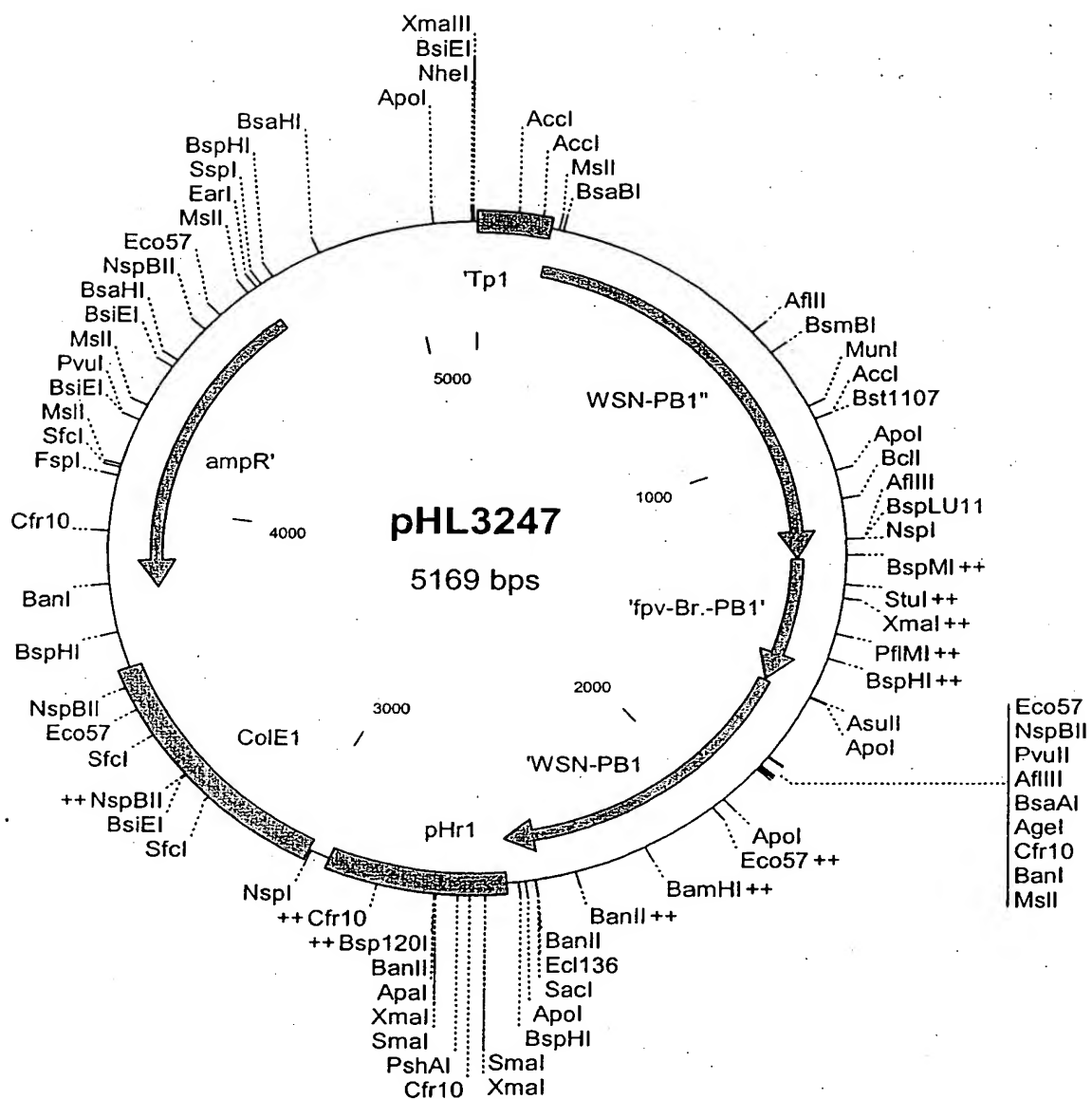
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Fig. 12



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Fig. 13



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Fig. 14

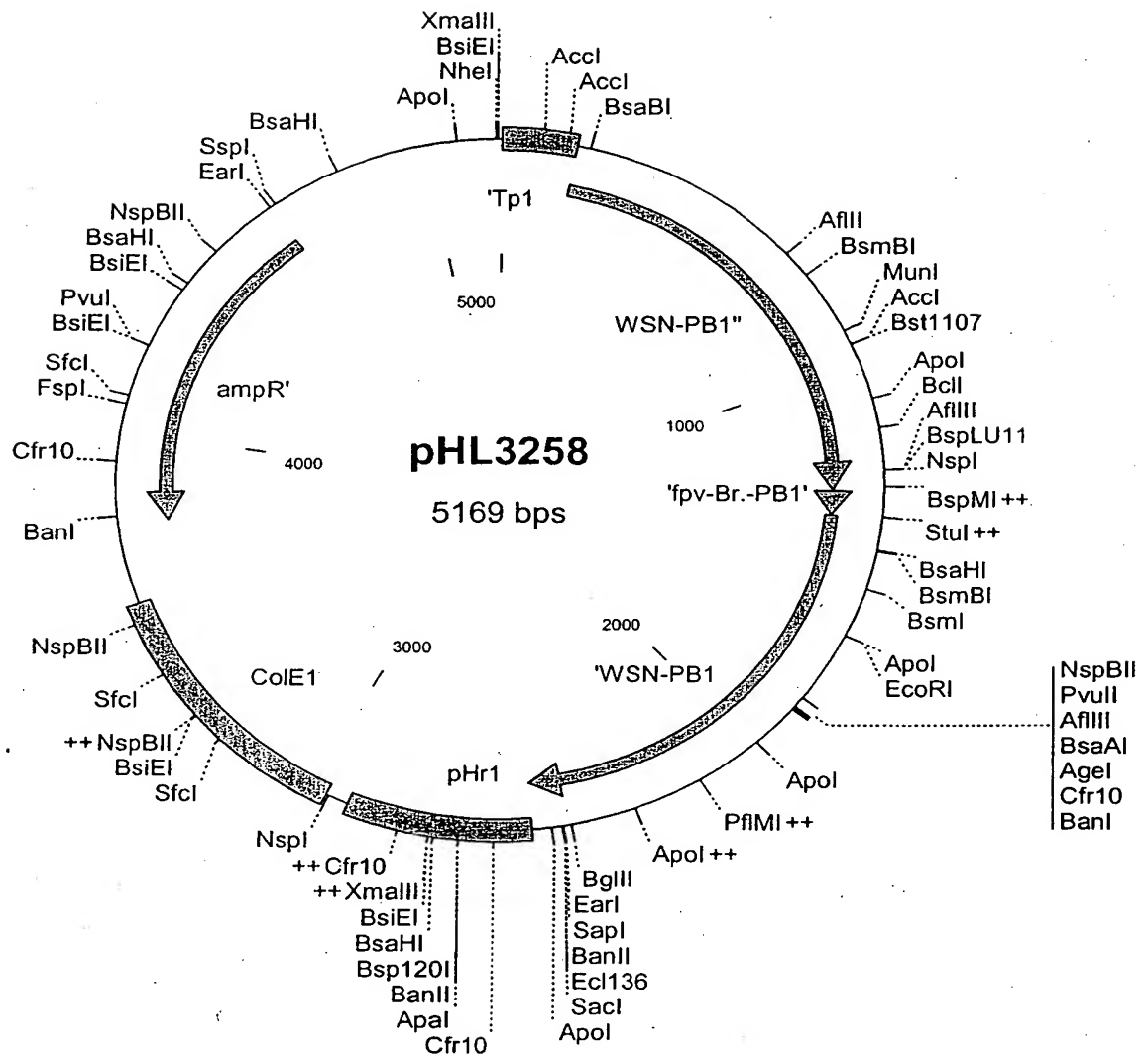
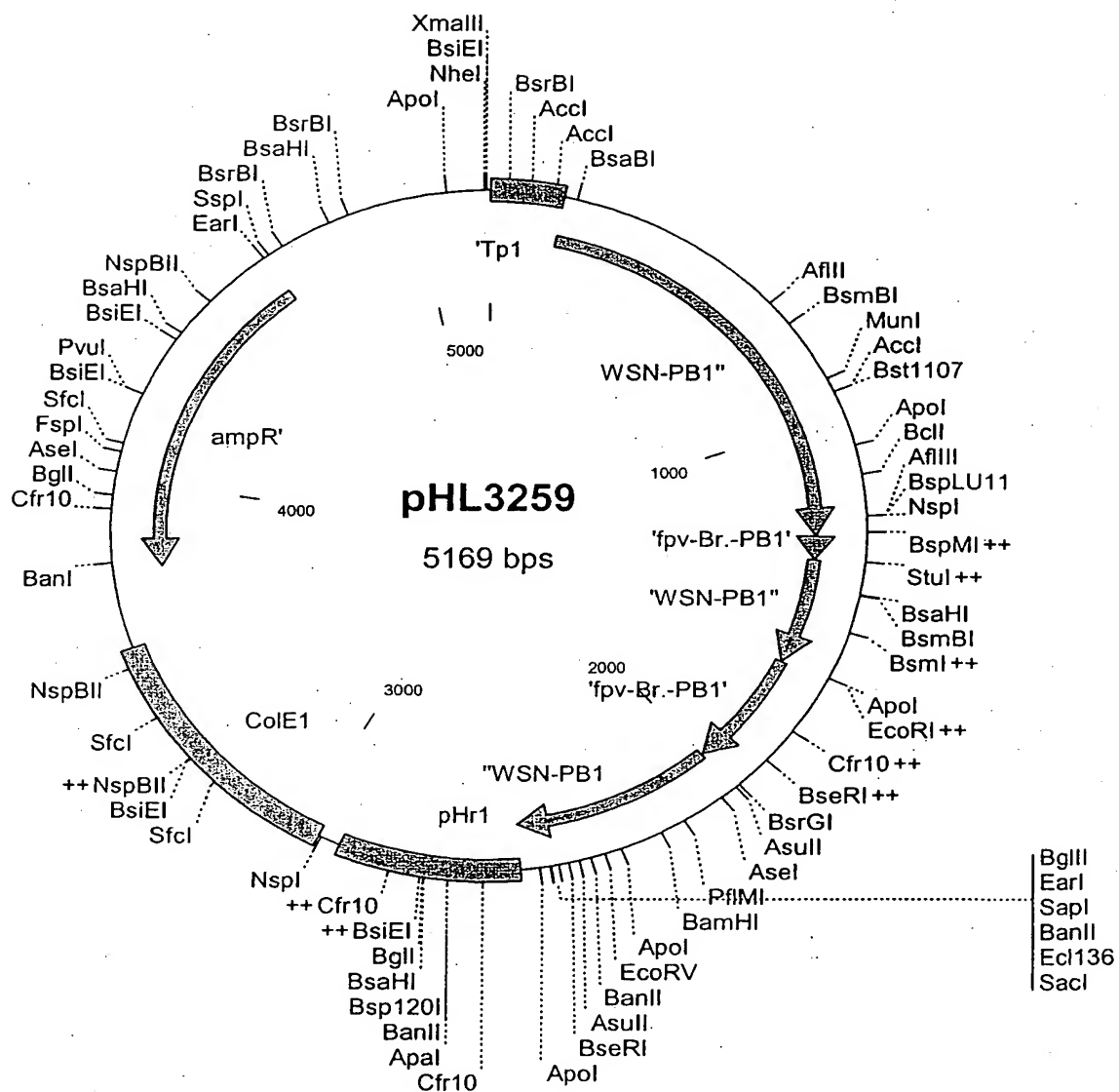
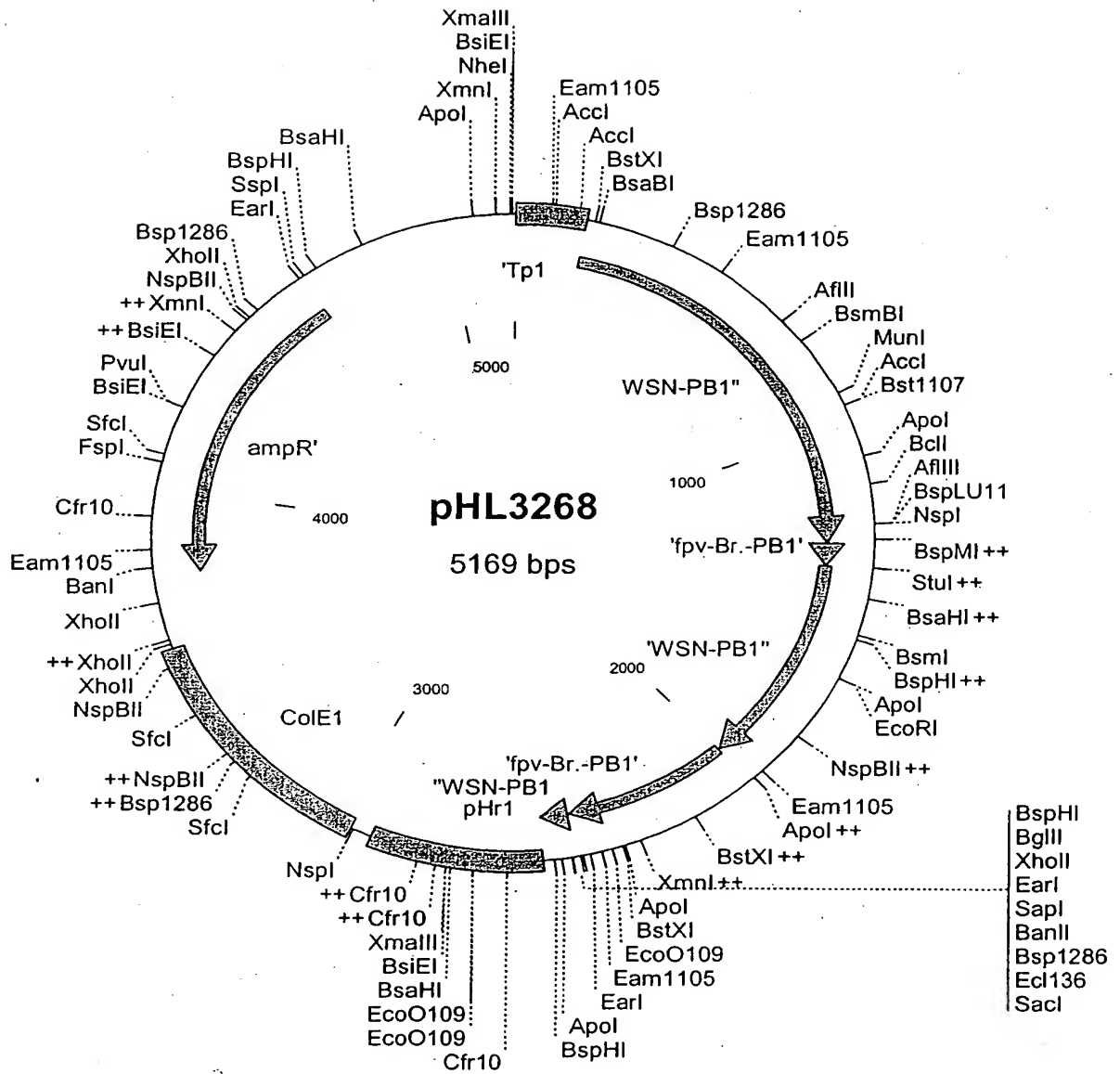


Fig. 15



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Fig. 16



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